WATER SUPPLY OUTLOOK

KOOTENAI RIVER BASIN

MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Increase in the mountain snow pack was below average during March. As of April 1, water stored in the snow was 11 percent more than a year ago and 7 percent above the 1948-62 average. Generally speaking, snow in the upper reaches of the Kootenai River in British Columbia is about average, increasing to above average in the Montana portion of the drainage.

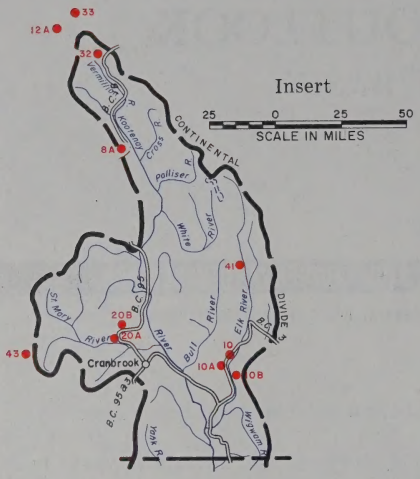
Streamflow in the Kootenai River is forecast to be slightly greater than last year and about the same as the 1948-62 average. Tributary streams in Montana are expected to produce near or slightly above average flows for the spring and summer period.

The snow is very dense in the higher elevations which should prolong the runoff over a longer period.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

"The Conservation of Water begins with the Snow Survey"

KOOTENAI RIVER BASIN



LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

See Insert

C A N A D A

I D A H O

L I N C O L N

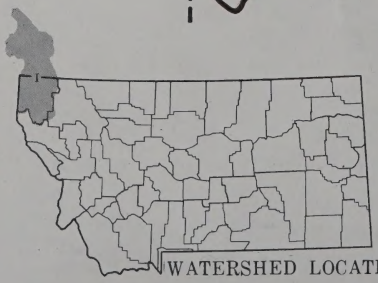
F L A T H E A D

L I N C O L N S. W. C. D.

Yaak River
Yaak
U.S. 93
3050
3045
Troy
Libby
3030
KOOTENAI RIVER
MONT. 37
Rexford
Eureka
Tobacco River
U.S. 93
Warland
Fisher Creek
Wolf Creek
3020
Libby Creek
Happy Inn
U.S. 2
15A01
14A07
14A11
14A04
15A02
15B11
15B15

N

10 0 10
SCALE IN MILES



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED I

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
15B11	Baree Creek	5500	4/1	115	48.1	56.3	50.5
15B15	Baree Trail	3800	4/1	29	10.6	-	-
14A04	Brush Creek	5000	3/30	43	13.7	13.4	14.3*
BC 10	Fernie	3500	4/1	33	13.1	9.3	9.5
BC 12A	Field	4200	3/28	25	8.1	3.1	5.4
BC 11	Glacier	4100	4/2	66	25.8	27.9	27.6
14A11	Graves Creek	4300	3/31	61	21.8	-	-
BC 43	Gray Creek	5100	4/1	57	19.9	18.6	19.7
BC 33	Kicking Horse	5400	3/28	52	15.8	13.4	14.8
BC 20B	Kimberley	3800	3/31	28	10.6	7.7	7.7
BC 32	Marble Canyon	5000	3/29	52	15.2	11.9	13.8
BC 10B	Morrissey Ridge	6100				-	-
BC 10A	New Fernie	4100	4/1	51	20.1	16.3	15.4*
15A01	Red Mountain	6000	4/1	58	22.1	18.0	21.4
BC 8A	Sinclair Pass	4500	3/29	20	.6	4.0	5.4
BC 20A	Sullivan Mine	5100	3/30	49	15.6	11.9	15.6
BC 41	Upper Elk River	4400	3/28	31	9.7	6.4	8.2
14A07	Weasel Divide	5450	3/31	98	40.0	36.8	34.1

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
15B15M	Baree Trail	3800	48	7.5	4/1	6.2	-	-
14A10M	Murphy Lake R. S.	3000	48	22.6	4/2	22.3	-	-
15A02M	Raven R. S.	3050	48	23.0	4/1	21.0	-	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED I

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	FISHER RIVER					
3020	Jennings (near)	Apr-Sept	328	103		318
	KOOTENAI RIVER					
3030	Libby (at)	Apr-Sept	8300	102	7802	8096
3050	Leonia (at)	Apr-Sept	9600	103	9037	9327

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

FLATHEAD RIVER BASIN
MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

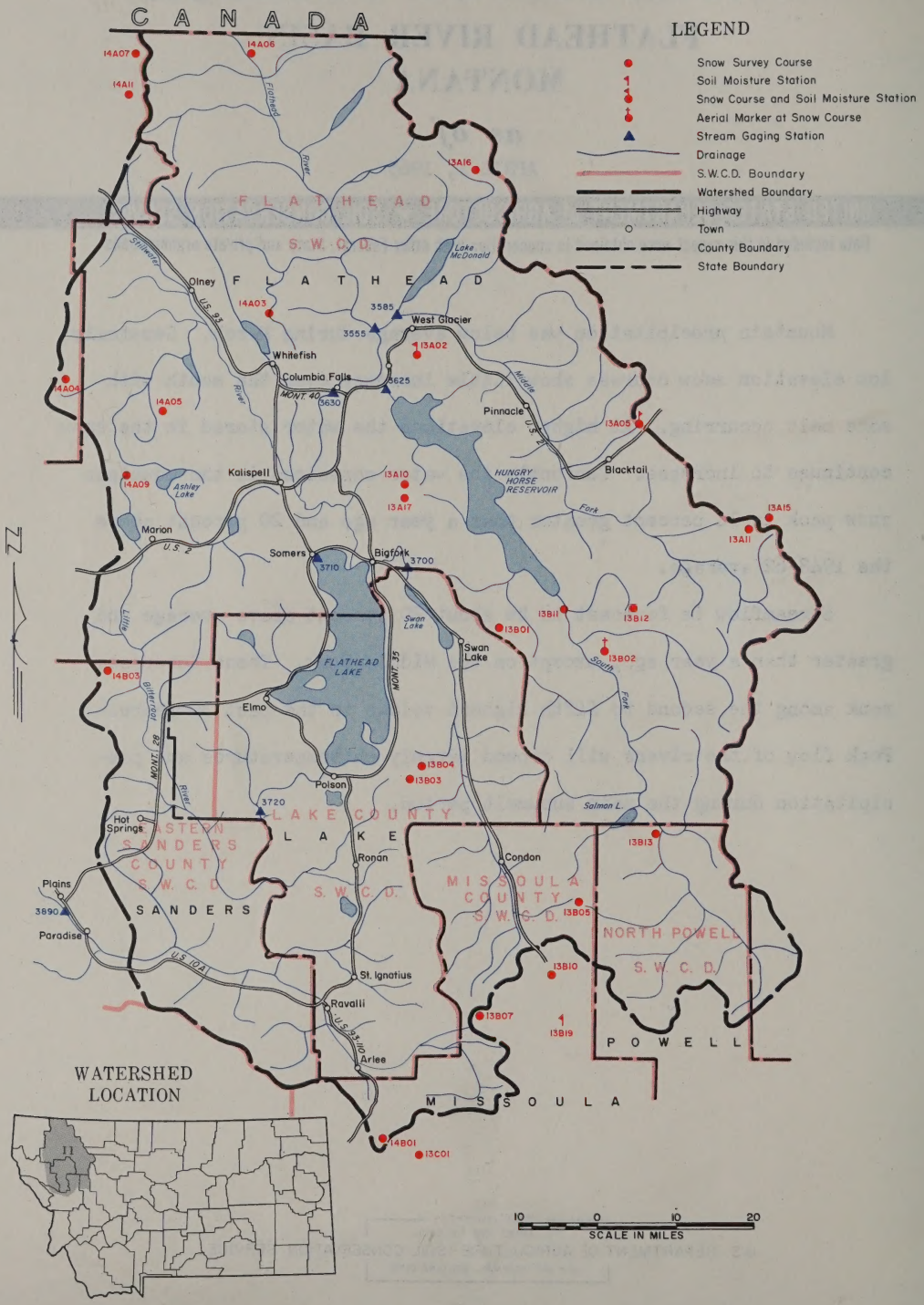
Data included in this report were obtained in cooperation with other Federal, State and private organizations

Mountain precipitation was below average during March. Generally, low elevation snow courses show little increase over the month with some melt occurring. At higher elevations the water stored in the snow continues to increase. Currently the water contained in the mountain snow pack is 14 percent greater than a year ago and 20 percent above the 1948-62 average.

Streamflow is forecast to be about 20 percent above average and greater than a year ago, except on the Middle Fork. These forecasts rank among the second to fifth highest volume in the past 30 years. Peak flow of the rivers will depend largely on temperatures and precipitation during the main snowmelt period.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

FLATHEAD LAKE RIVER BASIN



SNOW SURVEY DATA

WATERSHED II

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13A15	Badger Pass	6900	3/30	107	44.5	39.6	-
14B03	Bassoo Peak	5150	3/29	44	12.6	11.6	13.4*
13A11	Beaver Lake	5900	3/30	79	30.9	22.8	-
13B03	Big Creek	6750	4/1	121	51.6	47.4	46.4
14A04	Brush Creek	5000	3/30	43	13.7	13.4	14.3*
13A17	Camp Misery	6400	3/30	140	61.0	51.1	-
13B10	Coyote Hill	4200	4/2	39	13.8	10.8	11.0
13A02	Desert Mountain	5600	3/29	57	21.9	17.2	16.9
13B04	Fatty Creek	5500	4/1	69	25.6	26.6	-
BC 10	Fernie	3500	4/1	33	13.1	9.3	9.5
14A11	Graves Creek	4300	3/31	61	21.8	-	-
14A09	Griffin Creek Divide	5150	3/31	41	13.2	11.8	14.3*
13B12	Gunsight Lake	6300	3/30	118	50.9	41.0	-
14A03	Hell Roaring Divide	5770	3/31	95	39.5	35.8	32.3
13B13	Holbrook	4530	3/30	40	14.5	13.8	10.4*
14A06	Kishenehn	3890	3/31	36	12.0	10.6	10.4
14A05	Logan Creek	4300	3/30	31	9.5	8.2	9.5
13A05	Marias Pass	5250	3/30	76	26.8	16.4	20.1
13A16	Mineral Creek	4000	3/30	76	26.6	22.8	22.9
BC 10B	Morrissey Ridge	6100				-	-
BC 10A	New Fernie	4100	4/1	51	20.1	16.3	15.4*
13B07	North Fork Jocko	6330	4/2	129	55.0	53.3	46.7
13B02	Spotted Bear Mountain	7000	3/30	53	19.9	17.3	15.5
13A10	Strawberry Lake	5600	3/31	129	54.6	44.8	44.7*
13C01	Stuart Mountain	7400	3/27	96	37.4	34.4	32.6
13B01	Trinkus Lake	6500	3/31	129	54.2	46.3	44.2*
14B01	TV Mountain	6800	3/28	69	23.2	19.6	18.7*
13B11	Twin Creeks	3580	3/31	35	15.9	16.0	12.1*
13B05	Upper Holland Lake	7000	3/31	108	45.0	39.0	36.3*
14A07	Weasel Divide	5450	3/31	98	40.0	36.8	34.1

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13A02M	Desert Mountain	5600	54	8.4	3/29	7.8	5.9	7.4
13A05M	Marias Pass	5250	54	6.5	3/31	5.7	4.5	5.4
13B19M	Seeley Lake	4030	48	11.9	4/2	10.0	3.0	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED II

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	Apr-Sept	2430	120	2232	2027
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	Apr-Sept	2300	120	2440	1923
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (nr)(17)	Apr-Sept	2900	122	2595	2381
	FLATHEAD RIVER					
3630	Columbia Falls (at)(17)	Apr-Sept	7800	120	7389	6497
3720	Polson (near)(18)	Apr-Sept	9250	119	8553	7778
	SWAN RIVER					
3700	Big Fork (near)	Apr-Sept	840	121	706	694

(17) Adjusted for storage in Hungry Horse Reservoir.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3620	Hungry Horse	3428.0	1567.0	2099.0	2244.4
3710	Flathead Lake	1791.0	958.1	722.9	690.8
3757	Camas (4)	45.2	22.0	19.4	33.8
3800	Mission Valley (8)	100.3	37.7	22.6	37.2

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

(17) Adjusted for storage in Hungry Horse Reservoir.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

WATER SUPPLY OUTLOOK

LOWER CLARK FORK RIVER BASIN

MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

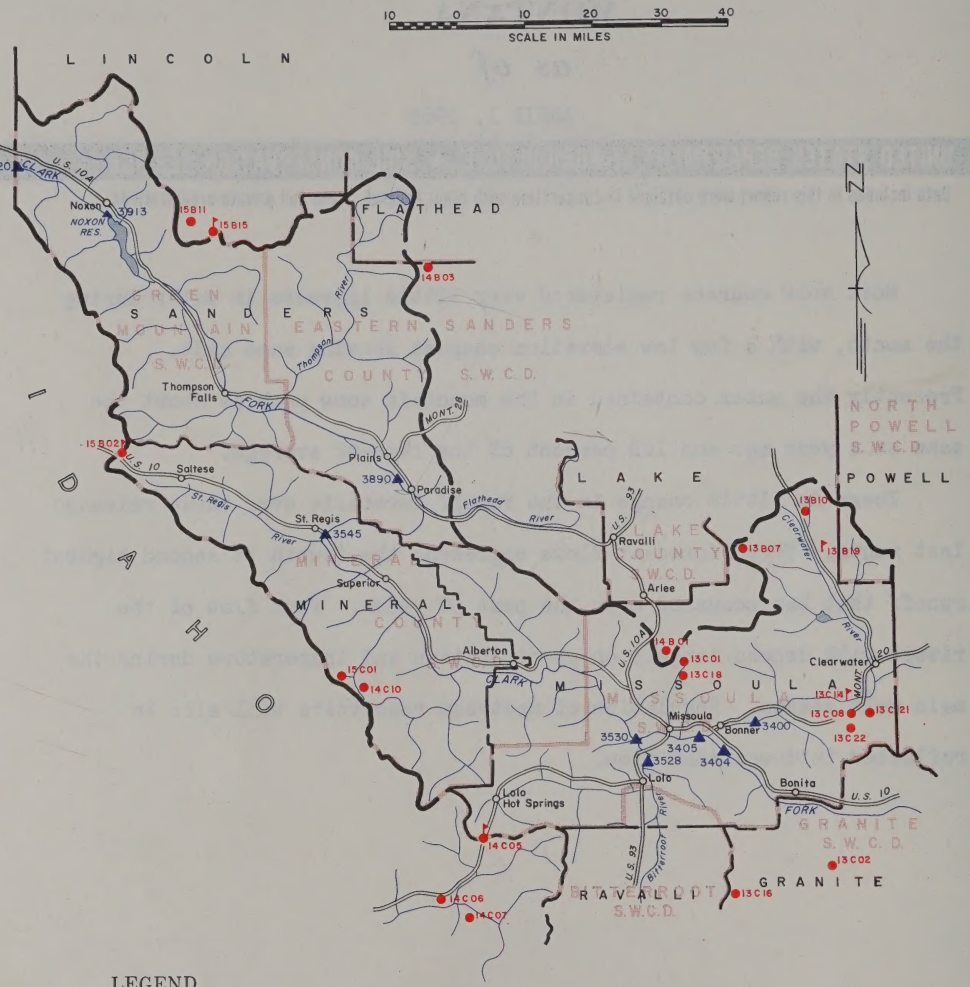
Data included in this report were obtained in cooperation with other Federal, State and private organizations

Most snow courses registered very little increase in water during the month, with a few low elevation courses showing some melt. Presently the water contained in the mountain snow pack is about the same as a year ago and 108 percent of the 1948-62 average.

There is little change in the runoff forecasts over those released last month. These forecast flows represent the fourth to second highest runoff that has occurred over the past 30 years. Peak flow of the rivers will depend largely on precipitation and temperature during the main melt season. Regulation of upstream reservoirs will also be reflected in downstream flow.

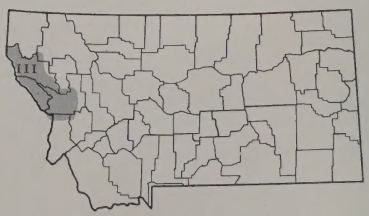
Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

LOWER CLARK FORK RIVER BASIN



LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED III

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13C16	Ambrose	6480	3/31	52	17.6	14.4	14.3*
15B11	Baree Creek	5500	4/1	115	48.1	56.3	50.5
15B15	Baree Trail	3800	4/1	29	10.6	-	-
14B03	Bassoo Peak	5150	3/29	44	12.6	11.6	13.4*
13B10	Coyote Hill	4200	4/2	39	13.8	10.8	11.0
14C10	Heart Lake Trail	4800	4/1	66	24.9	-	-
15C01	Hoodoo Creek	6200	4/1	130	55.6	49.8	53.4
14C05	Lolo Pass	5230	3/26	100	37.9	36.6	36.4*
15B02	Lookout	5250	3/29	108	41.0	41.6	40.5
13C21	Lubrecht Forest No. 3	5450	3/27	41	10.2	8.5	8.2*
13C22	Lubrecht Forest No. 4	4650	3/27	17	4.6	5.6	3.5*
13C08	Lubrecht Forest No. 6	4040	3/27	22	6.5	6.0	3.5*
13B07	North Fork Jocko	6330	4/2	129	55.0	53.3	46.7
14C04	Savage Pass	6600	3/25	85	32.1	31.6	30.5*
13C02	Slide Rock Mountain	7100	3/31	59	20.8	16.4	16.0
13C18	Spring Gulch	6000	3/27	54	17.2	15.9	12.5*
13C01	Stuart Mountain	7400	3/27	96	37.4	34.4	32.6
14B01	TV Mountain	6800	3/28	68	22.4	19.6	18.7*

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
15B15M	Baree Trail	3800	48	7.5	4/1	6.2	-	-
14C05M	Lolo Pass	5250	48	10.6	3/26	7.2	5.4	-
13B19M	Seeley Lake	4030	48	11.9	4/2	10.0	3.0	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED III

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	BLACKFOOT RIVER					
3400	Bonner (near)	Apr-Sept	1380	133	1105	1036
	BITTERROOT RIVER					
3528	Missoula (at)(16)	Apr-Sept	2005	129	1731	1553
	CLARK FORK RIVER					
3404	Milltown (above)(14)	Apr-Sept	1000	125	1025	802
3405	Missoula (above)	Apr-Sept	2380	130	2130	1838
3530	Missoula (below)	Apr-Sept	4385	129	3861	3391
3545	St. Regis (at)	Apr-Sept	5900	127	5033	4642
3890	Plains (near)(18)	Apr-Sept	15500	121	13905	12793
3920	Whitehorse Rapids (at)(19)	Apr-Sept	17400	121	15512	14398

(14) Difference in observed flow, Clark Fork above Missoula & Blackfoot near Bonner.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Adjusted for storage in Flathead Lake and Hungry Horse Reservoir.
(19) Adjusted for storage in Flathead Lake, Hungry Horse and Noxon Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3913	Noxon Rapids	334.6	150.4	155.2	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1966

No.	River and forecast point	Forecast period	Forecast (1000 acre-feet)	Average (1000 acre-feet)	Percent of average	Last year (1000 acre-feet)
	BLACKFOOT RIVER					
3200	Bonner (near)	Apr-Sept	1380	173	1105	1094
	BITTERROOT RIVER					
3278	Missoula (at)(12)	Apr-Sept	2005	127	1931	1573
	CLARK FORK RIVER					
3404	Milltown (above)(14)	Apr-Sept	1500	125	1209	[illegible]
3405	Missoula (above)	Apr-Sept	2380	130	2130	1829
3520	Missoula (below)	Apr-Sept	4265	127	3401	3371
3545	St. Regis (at)	Apr-Sept	5900	127	5012	4042
3800	Plains (near)(19)	Apr-Sept	15300	121	12905	12703
3920	Waterdown Reptia (at)(20)	Apr-Sept	27200	121	15172	14398

(14) Difference in observed flow, Clark Fork above Missoula & Bitterroot near Bonner.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Adjusted for storage in Flathead Lake and Hungry Horse Reservoir.
(19) Adjusted for storage in Flathead Lake, Hungry Horse and Noxon Reservoirs.

*Preliminary data furnished by U. S. Geological Survey

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1966

(1000 acre-feet)

No.	Reservoir	Usable capacity	1965 year	Last year	Average
3913	Noxon Rapids	334.6	190.4	185.6	-

NOTE: All averages based on 1940-1965 (25 year period).

WATER SUPPLY OUTLOOK

UPPER CLARK FORK RIVER BASIN

MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The irrigation water supply outlook remains excellent. The snow pack is dense and water stored in the snow continues to increase at the higher elevations. Late season irrigation water should be more abundant than usual. Most of the high elevation courses have record or near record water content for this time of year.

Currently the water stored in the mountain snow pack is 23 percent above the 1948-62 average.

Runoff during the April through September period is forecast to be the second to fifth highest in the past 30 years. Peak flows will depend largely on precipitation and temperatures during the main snow-melt period.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

UPPER CLARK FORK RIVER BASIN

SNOW SURVEY DATA

WATERSHED IV

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13C16	Ambrose	6480	3/31	52	17.6	14.4	14.3*
13C13	Black Pine	7100	4/1	53	19.4	16.0	14.6*
12C05	Chessman Reservoir	6200	3/30	25	6.1	7.4	4.9
12B10	Copper Creek	5700	3/29	54	18.8	15.6	-
12B11	Cotter Mine	6250	3/29	62	22.6	17.6	-
13C09	El Dorado Mine	7800	3/30	78	30.2	22.2	22.6*
13C11	Fred Burr Pass	8000	4/2	87	36.2	27.2	29.0*
13C10	Gold Creek Lake	7200	3/30	62	22.3	18.1	17.0*
13C04	Intergaard	6450	4/1	34	10.7	9.5	8.5*
13C21	Lubrecht Forest No. 3	5450	3/27	41	10.2	8.5	8.2*
13C22	Lubrecht Forest No. 4	4650	3/27	17	4.6	5.6	3.5*
13C08	Lubrecht Forest No. 6	4040	3/27	22	6.5	6.0	3.5*
12D01	Pipestone Pass	7200	4/1	24	6.2	4.0	6.2
13C12	Red Lion	7100	4/2	65	24.1	17.2	17.5*
13C03	Skalkaho Summit	7260	4/1	86	35.7	26.4	27.4
13C02	Slide Rock Mountain	7100	3/31	59	20.8	16.4	16.0
13C05	Southern Cross	6500	4/1	29	9.1	8.0	7.0*
12C01	Stemple Pass	6600	4/1	45	13.8	12.9	11.0
13C07	Storm Lake	7780	4/2	57	20.0	14.6	15.5
13C06	Stuart Mill	6500	4/1	29	8.2	7.6	7.5*
12C02	Ten Mile Lower	6600	3/30	40	10.5	8.0	7.2
12C03	Ten Mile Middle	6800	3/31	49	15.1	12.5	11.2
12C04	Ten Mile Upper	8000	3/31	60	20.6	16.7	14.3

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13C15M	Georgetown Lake	6450	48	9.0	4/2	3.2	2.5	-
13C03M	Skalkaho Summit	7260	48	10.8	4/1	8.9	-	-
12C08M	Stemple Pass	6350	48	5.9	3/30	4.2	4.7	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED IV

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	FLINT CREEK					
3301	Boulder Creek (below)(13)	Apr-Sept	88.6	121	88.7	73.0
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg (near)	Apr-Sept	100	128	86.9	77.8
	BLACKFOOT RIVER					
3400	Bonner (near)	Apr-Sept	1380	133	1105	1036
	CLARK FORK RIVER					
3404	Milltown (above)(14)	Apr-Sept	1000	125	1025	802

(13) Sum, Flint Creek at Maxville and Boulder Creek at Maxville.
(14) Difference in observed flow, Clark Fork above Missoula and Blackfoot near Bonner.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3250	Georgetown Lake	31.0	23.9	25.6	21.8

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1968

No.	Point of forecast	Forecast period	Forecast (thousand acre-feet)	Median (thousand acre-feet)	1967 as % of median	1966 as % of median
	BILLY CREEK					
3301	Boulder Creek (below)(13)	Apr-Sept	42.5	141	88.7	73.0
	BIGGIE ICE ROCK CREEK					
3240	Whitewater (near)	Apr-Sept	190	124	65.9	77.8
	BLACKFOOT RIVER					
3400	Bonner (near)	Apr-Sept	1590	133	1195	109%
	CLARK FORK RIVER					
3404	Milltown (above)(14)	Apr-Sept	1900	124	1095	81%

(13) Sum, Billy Creek at Maxville and Boulder Creek at Maxville.
(14) Difference between reserved flow, Clark Fork above Missoula and Blackfoot near Bonner.

*Hydrological data furnished by U. S. Geological Survey

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

No.	Reservoir	Capacity (thousand acre-feet)	1967 med.	1967 area	1966 area
3250	Georgetown Lake	34.5	23.9	25.6	21.4

NOTE. All averages based on 1948-1967 (19 year period).

WATER SUPPLY OUTLOOK

BITTERROOT RIVER BASIN

MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

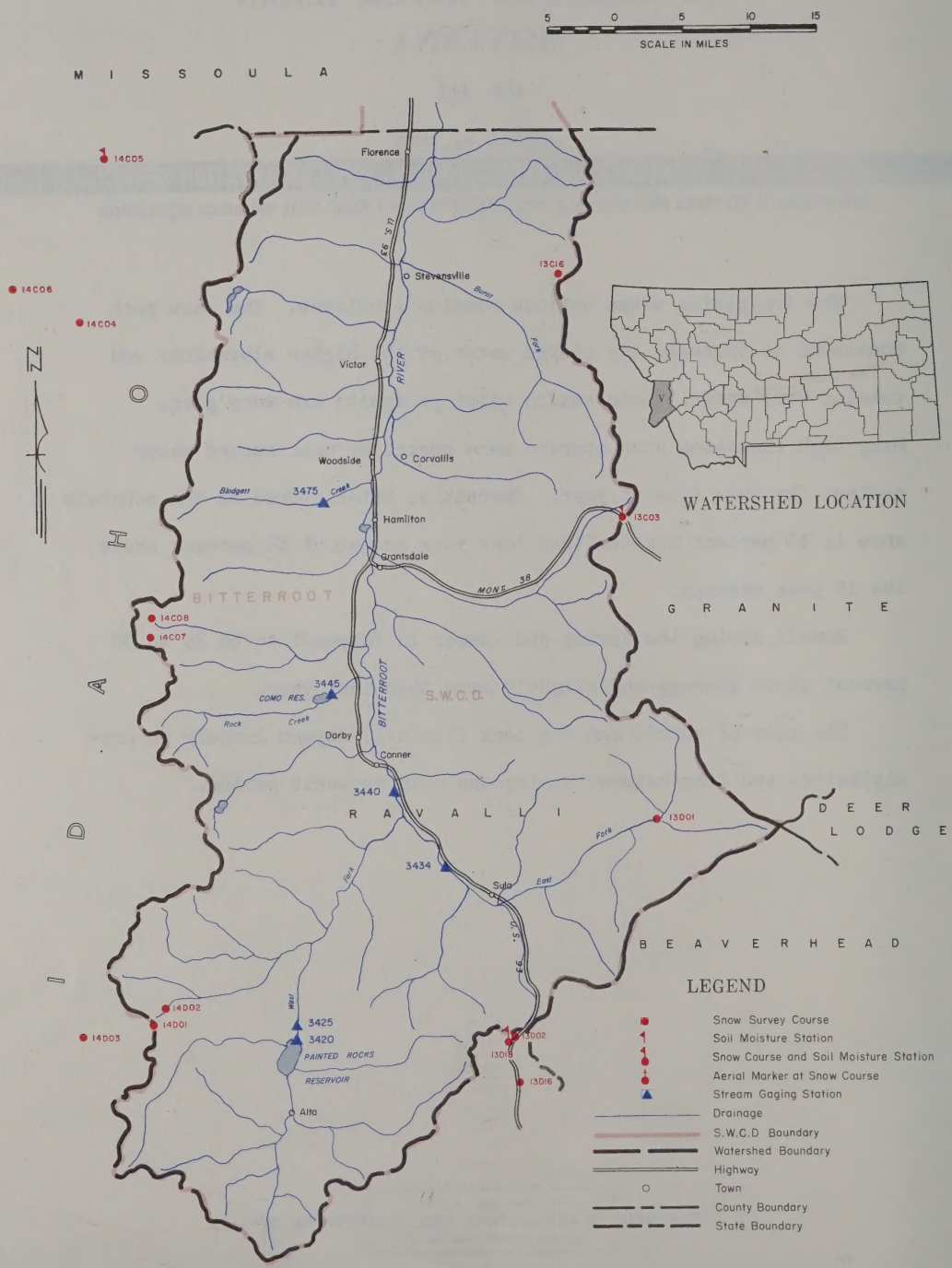
The irrigation water outlook remains excellent. The snow pack continued to increase its stored water at the higher elevations and remains very dense. Late season water prospects are very good. Many high elevation snow courses have record or near record water content for this time of year. Currently, water stored in the mountain snow is 11 percent greater than last year and about 20 percent above the 15 year average.

Runoff during the spring and summer is forecast to be 25 to 30 percent above average and slightly more than last year.

The rate of runoff and the peak flow will depend largely on precipitation and temperatures during the main snowmelt period.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

BITTERROOT RIVER BASIN



SNOW SURVEY DATA

WATERSHED V

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13C16	Ambrose	6480	3/31	52	17.6	14.4	14.3*
13D01	East Fork R. S.	5400	4/2	27	8.4	8.6	7.7
13D02	Gibbons Pass	7100	3/28	85	30.5	23.3	25.0
14D03	Kit Carson	5020	3/29	41	12.6	12.4	9.0
14C05	Lolo Pass	5230	3/26	100	37.9	36.6	36.4*
14C07	Lost Horse	5940	3/30	100	38.4	39.6	35.6*
13D16	Moose Creek	6200	3/29	67	24.6	20.5	17.1
14D02	Nez Perce Camp	5580	3/29	64	20.3	19.9	15.8
14D01	Nez Perce Pass	6570	3/29	66	23.3	21.0	18.3
13D22	Saddle Mountain	7940	4/2	83	32.6	-	-
14C04	Savage Pass	6600	3/25	85	32.1	31.6	30.5*
13C03	Skalkaho Summit	7260	4/1	86	35.7	26.4	27.4
14C08	Twin Lakes	6510	3/30	128	54.6	47.6	46.7*

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13D18M	Gibbons Pass	7100	48	7.1	4/2	5.4	5.5	-
14C05M	Lolo Pass	5250	48	10.6	3/26	7.2	5.4	-
13C03M	Skalkaho Summit	7260	48	10.8	4/1	8.9	-	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED V

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	Apr-Sept	226	126		179
	BITTERROOT RIVER					
3440	Darby (near)	Apr-Sept	745	128	730	582
3528	Missoula (at)(16)	Apr-Sept	2005	129	1731	1553
	BLODGETT CREEK					
3475	Corvallis (near)	Apr-Sept	57.0	128		44.6

(15) Adjusted for storage in Painted Rocks Reservoir.
(16) Difference in observed flow, Clark Fork above and below Missoula.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3420	Painted Rocks	31.7		-	15.1
3445	Como	34.9	17.2	9.6	13.4

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1966

No.	River and forecast point	Forecast period	Monthly flow (1000 acre-feet)	Percent average	Water supply index (1000 acre-feet)	
					Last year	Average
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	Apr-Sept	224	120		178
	BITTERROOT RIVER					
3440	Darby (near)	Apr-Sept	745	138	730	542
3528	Missoula (at)(16)	Apr-Sept	2005	130	1732	1545
	MOUNTAIN CREEK					
3475	Corvallis (near)	Apr-Sept	57.0	124		46.4

(15) Adjusted for storage in Painted Rocks Reservoir.
(16) Determined by observed flow, Clark Fork above and below Missoula.

"PRELIMINARY DATA CONTAINED IN W. R. D. MONTHLY SURVEY"

RESERVOIR STORAGE DATA

AS OF EARLY MAY, 1966

No.	Reservoir	Normal capacity	This year (1000 acre-feet)	Last year (1000 acre-feet)	Average (1000 acre-feet)
3420	Painted Rocks	31.7		-	15.1
3445	Como	34.5	17.2	9.6	13.4

NOTE: ALL RESERVOIR STORAGE ON LOWER-LEVEL IS WARM SPRINGS.

WATER SUPPLY OUTLOOK
MARIAS, TETON and SUN RIVER BASINS
MONTANA
as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The irrigation water supply outlook remains excellent. The high elevation snow pack continues to increase its stored water and remains very dense. The prospect for late season irrigation water is good.

Currently the mountain snow is 42 percent greater than it was last year and 35 percent above the 15 year average.

Runoff during the spring and summer months is forecast to be 10 to 25 percent above average. The rate of runoff and the peak flows will depend largely on the precipitation and temperatures during the main snowmelt period.

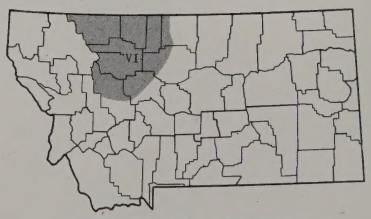
Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

"The Conservation of Water begins with the Snow Survey"

MARIAS, TETON and SUN RIVER BASINS

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED VI

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13A15	Badger Pass	6900	3/30	107	44.5	39.6	-
13A11	Beaver Lake	5900	3/30	79	30.9	22.8	-
12B06	Cabin Creek	5200	3/30	37	12.4	8.9	7.0*
12B09	Five-Bull	5700	3/30	35	10.0	5.8	7.1*
12A01	Freight Creek	6000	3/29	65	24.2	15.2	17.0
12B07	Goat Mountain	7000	3/31	51	16.2	11.5	12.3
13A05	Marias Pass	5250	3/30	76	26.8	16.4	20.1
13A16	Mineral Creek	4000	3/30	76	26.6	22.8	22.9
12B01	West Fork	6000	3/29	64	24.4	14.2	16.9*
12B04	Wrong Creek	5700	3/30	59	21.8	16.8	15.8*
12B03	Wrong Ridge	6800	3/30	72	29.1	22.0	22.2*

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13A05M	Marias Pass	5250	54	6.5	3/31	5.7	4.5	5.4

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED VI

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SUN RIVER					
0786	Gibson Dam (at)(10)	Apr-Sept	740	121	737	610
	TWO MEDICINE CREEK					
0920	Browning (near)(20)	Apr-Sept	323	123	303	271
	BADGER CREEK					
0925	Browning (near)	Apr-Sept	167	117	190	143
	CUT BANK CREEK					
0990	Cut Bank (at)	Apr-Sept	159	112	141	142
	MARIAS RIVER					
0995	Shelby (near)(9)	Apr-Sept	760	117	814	651
	MISSOURI RIVER					
0908	Fort Benton (at)(5)	Apr-Sept	4480	135	4848	3319

(5) Adjusted for storage in Canyon Ferry Reservoir.
(9) Adjusted for storage in Two Medicine, Four Horns, Lake Francis and Swift Reservoir.
(10) Adjusted for storage in Gibson Reservoir and diversions.
(20) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0795	Gibson	105.0	49.8	17.9	60.5
0805	Pishkun	32.0	17.1	17.1	21.1
0820	Willow Creek	32.3	16.1	21.2	18.2
0940	Swift	30.0	-	11.9	23.9
0955	Lake Francis	112.0	84.8	34.3	92.8
1013	Tiber	1313.0	691.8	650.9	647.4

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

(5) Adjusted for storage in Canyon Ferry Reservoir.
(9) Adjusted for storage in Two Medicine, Swift Bowman, Lake Frances and Swift Reservoir.
(10) Adjusted for storage in Gibson Reservoir and diversions.
(20) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

*Preliminary data furnished by U. S. Weather Bureau

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1945

(1000 Acre Feet)

No.	Reservoir	Active Capacity	First Year	Last Year	Contents
0795	Gibson	105.0	45.5	17.7	50.5
0805	Pishkun	32.5	17.1	17.1	21.1
0820	Willow Creek	32.3	16.1	21.2	18.2
0940	Swift	30.0	-	11.5	29.9
0955	Lake Frances	112.0	81.4	81.3	92.3
1013	Tiber	1313.0	685.8	646.8	647.4

NOTE: All acreages based on 1929-1943 base period.

WATER SUPPLY OUTLOOK
MISSOURI RIVER (MAIN STEM) BASIN
MONTANA
as of
APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
Data included in this report were obtained in cooperation with other Federal, State and private organizations

The irrigation water supply outlook improved somewhat during the past month and is very good. Water stored in the high elevation snow pack continues to increase and also remains very dense. Late season water supplies should be above average.

The snow water covering the mountain watersheds is now about 10 percent greater than a year ago and 32 percent above the 1948-62 average.

Streamflow during the April through September period is forecast to be between the sixth and fourth largest volumes in the past 30 years. The rate of runoff and peak flows will be largely dependent on precipitation and temperatures during the main snowmelt period.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

MISSOURI RIVER (MAIN STEM) BASIN

SNOW SURVEY DATA

WATERSHED VII

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
11C01	Boulder Mountain	7950	3/29	65	20.8	21.2	-
12C05	Chessman Reservoir	6200	3/30	25	6.1	7.4	4.9
10C07	Elk Peak	8000	3/30	65	23.0	19.4	-
10C02	Grasshopper	7000	3/30	28	6.7	8.4	5.7
10C01	Kings Hill	7500	3/30	56	17.0	16.7	13.6
10C06	Spur Park	8000	3/31	74	27.5	25.4	-
12C01	Stemple Pass	6600	4/1	45	13.8	12.9	11.0
12C02	Ten Mile Lower	6600	3/30	40	10.5	8.0	7.2
12C03	Ten Mile Middle	6800	3/31	49	15.1	12.5	11.2
12C04	Ten Mile Upper	8000	3/31	60	20.6	16.7	14.3

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
10C01M	Kings Hill	7420	48	11.8	3/31	8.2	7.8	-
12C08M	Stemple Pass	6350	48	5.9	3/30	4.2	4.7	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED VII

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER					
0545	Toston (at)(3)	Apr-Sept	2850	132	2694	2147
0908	Fort Benton (at)(5)	Apr-Sept	4480	135	4848	3319
	PRICKLY PEAR CREEK					
0615	Clancy (near)	Apr-Sept	26.4	120	35.5	22.0
	SUN RIVER					
0786	Gibson Dam (at)(10)	Apr-Sept	740	121	737	610

(3) Adjusted for storage in Hebgen and Ennis Lakes.
(5) Adjusted for storage in Canyon Ferry Reservoir.
(10) Adjusted for storage in Gibson Reservoir and diversions.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0585	Canyon Ferry	2043.0	1643.0	1726.0	1529.0
0645	Lake Helena	10.4	9.0	7.2	5.6
0650	Hauser Lk. & Lk. Helena	61.9	57.9	52.5	44.8
0660	Holter Lake	81.9	15.0	22.9	51.7
0750	Smith River	10.7	8.8	7.6	6.5

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(Acre-feet)

No.	River and reservoir point	Forecast (1000)	Forecast (1000)	Percent average	Measured flow	
			This year	Average	Last year*	Average
	MISSOURI RIVER					
0545	Toston (at)(1)	Apr-Sept	2850	122	2004	2147
0950	Fort Benton (at)(5)	Apr-Sept	4420	137	4842	3715
	BEAVERTAIL CREEK					
0615	Elmore (water)	Apr-Sept	26.4	120	35.5	22.0
	BOW RIVER					
0750	Gibson Dam (at)(10)	Apr-Sept	720	121	737	612

(3) Adjusted for storage in Ennis and Hebgen Lakes.
(5) Adjusted for storage in Canyon Ferry Reservoir.
(10) Adjusted for storage in Gibson Reservoir and diversions.

*Preliminary data furnished by U. S. Bureau of Reclamation

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

No.	Reservoir	Usable capacity	This year	Last year	Average
0555	Canyon Ferry	2051.0	1843.0	1726.0	1329.0
0645	Lake Helena	10.4	9.0	7.2	5.6
0650	Hauser Lk. & Lk. Helena	91.9	57.9	52.3	44.5
0680	Nelson Lake	81.9	15.0	22.9	21.7
0750	Smith River	10.7	8.5	7.6	4.5

WATER SUPPLY OUTLOOK
JEFFERSON RIVER and TRIBUTARY BASINS
MONTANA
as of
APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
Data included in this report were obtained in cooperation with other Federal, State and private organizations

The irrigation water supply outlook is very good to excellent. Water stored in the mountain snow continues to increase and many snow courses now have record or near record high water content. The high elevations that hold water for late season runoff have heavy dense snow cover that should provide good late season irrigation supply.

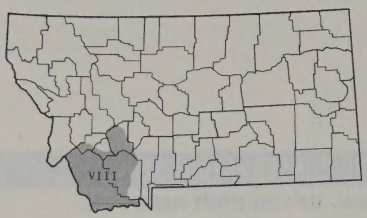
Presently the mountain snow pack is about 50 percent greater than last year and 39 percent above the 15 year average on the Beaverhead drainage. The Big Hole area has a snow pack about 35 percent above last year and 36 percent above average. A new snow course has been established near Dad Creek Lake on the Medicine Lodge-Horse Prairie drainage.

Streamflow during the next six months on the Beaverhead tributaries is forecast to be about the second or third highest volume runoff that has occurred in the past 30 years. In the Big Hole and Boulder River areas, runoff should rank between the fourth and sixth highest since 1935.

The rate of runoff and peak flows will depend largely on the temperatures and precipitation during the main melt period.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

JEFFERSON RIVER and TRIBUTARY BASINS



WATERSHED LOCATION

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

15 0 15 30
SCALE IN MILES

SNOW SURVEY DATA

WATERSHED VIII

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13D20	Abundance Lake	8800	3/30	75	26.7	20.6	-
12C07	Berry Meadow	7300	4/2	35	9.5	7.4	-
13D10	Bloody Dick	7600	3/30	50	16.6	10.6	11.7
11E11	Blue Ledge Mine	6700	3/28	49	18.0	14.5	16.7
11D07	Call Road	8050	3/30	47	13.9	12.7	-
12E03	Camp Creek	6800	3/29	38	12.7	9.1	10.4
12D04	Carter Creek	7400	3/28	34	7.4	4.9	-
12C05	Chessman Reservoir	6200	3/30	25	6.1	7.4	4.9
11D08	Clover Meadow	8600	3/30	62	22.4	16.8	-
11D06	Crockett Lake	8400	3/30	46	13.8	12.2	-
13E22	Dad Creek Lake	8400	3/23	61	20.4	-	-
13D19	Darkhorse Lake	8600	3/30	89	36.4	26.4	-
12E07	Divide	7900	3/30	49	15.7	10.4	-
13D15	Elk Horn Springs	7800	3/29	49	15.2	8.3	10.4
13D21	Foolhen	8280	3/30	67	23.1	17.5	-
13D02	Gibbons Pass	7100	3/28	85	30.5	23.3	25.0
13D09	Gold Stone	8100	3/30	62	21.2	14.7	15.3
13D08	Jahnke Creek	7340	3/30	43	13.2	8.6	11.2
11E12	Kilgore	6200	3/28	33	10.9	11.0	10.0
11E04	Lakeview Canyon	6930	3/30	54	19.4	9.3	10.8
11E03	Lakeview Ridge	7400	3/30	48	17.0	8.6	9.7
13E01	Lemhi Pass	7480	3/29	49	15.3	9.0	9.2
13D16	Moose Creek	6200	3/29	67	24.6	20.5	17.1
11D03	North Meadow	7500	3/31	45	13.7	6.4	-
12E06	Notch	8500	3/30	53	17.7	13.8	-
12C06	Picnic Grounds	6500	4/1	20	5.2	5.1	4.8*
12D01	Pipestone Pass	7200	4/1	24	6.2	4.0	6.2
13C07	Storm Lake	7780	4/2	57	20.0	14.6	15.5
12C02	Ten Mile Lower	6600	3/30	40	10.5	8.0	7.2
12C03	Ten Mile Middle	6800	3/31	49	15.1	12.5	11.2
12C04	Ten Mile Upper	8000	3/31	60	20.6	16.7	14.3
13E02	Trail Creek	7090	3/29	46	14.2	8.4	8.8
12E01	White Pine Ridge	8850	3/30	30	6.7	6.8	5.9

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13D18M	Gibbons Pass	7100	48	7.1	4/2	5.4	5.5	-
11E13M	Lakeview	6700	48	15.3			8.8	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED VIII

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	Apr-Sept	104	145	83.7	71.2
0125	Monida (near)(1)	Apr-Sept	113	144	110	78.3
	BIG HOLE RIVER					
0255	Melrose (near)	Apr-Sept	957	133	849	778
	BOULDER RIVER					
0330	Boulder (near)	Apr-Sept	94.6	124	108	76.3
	JEFFERSON RIVER					
0345	Sappington (at)	Apr-Sept	1300	133	1294	974

(1) Adjusted for storage in Lima Reservoir.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0153	Clark Canyon	225.6	85.7	-	-
0120	Lima	84.0	46.1	15.0	27.3
0205	Ruby	38.8		-	26.1

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1964

(1000 Acre Feet)

No.	River and Forecast Point	Forecast Period	Forecast Runoff Volume	Percent Of Average	Measured Flow Last Year*	Measured Flow Average
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	Apr-Sept	104	143	93.7	72.4
0125	Rocksbs (near)(1)	Apr-Sept	113	144	110	78.3
	BIG HOLE RIVER					
0255	Melrose (near)	Apr-Sept	957	143	614	678
	DOUBLE RIVER					
0320	Boulder (near)	Apr-Sept	74.6	124	108	60.2
	JEFFERSON RIVER					
0245	Sappington (at)	Apr-Sept	1300	143	1294	972

(1) Adjusted for storage in Lima Reservoir.

*Preliminary data furnished by U. S. Geological Survey

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1964

(1000 Acre Feet)

No.	Reservoir	Usable Capacity	This Year	Last Year	Average
0159	Clark Canyon	225.6	85.7	-	-
0120	Lima	94.0	49.1	15.0	27.3
0205	Ruby	36.8		-	26.1

NOTE: All averages based on 1942-1964 10 year period.

WATER SUPPLY OUTLOOK

MADISON and GALLATIN RIVER BASINS

MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The irrigation water supply outlook is very good to excellent. Mountain snow cover contains about 35 percent more water than it did last year in both the Gallatin and Madison drainages. This year's snow pack is about 35 percent greater than last year on the Madison. The Gallatin snow pack is 25 percent greater than a year ago. High elevation snow has record or near record water content and remains very dense. Late season irrigation water is expected to be above average.

Runoff is forecast to be about the third highest that has occurred on the Madison in the past 30 years. The Gallatin is expected to produce the fourth highest. Tributary streams to these two rivers will also produce comparable runoff, the exception being streams with low elevation headwaters. These streams will produce above average flows but will not be as high percentagewise as those with headwaters in the heavy, high elevation snow pack area.

The rate of runoff and peak flows will depend largely on temperatures and precipitation during the main snowmelt period.

New snow courses have been established to help index snow cover in the Madison-Gallatin area. Bridger Bowl, south of the ski area, will provide data from the higher elevation of the Bridger Mountain range. Four Mile and Lower Twin, on North Meadow Creek in the Tobacco Root Mountains, will supplement data obtained at North Meadow Snow Course. Potomageton Park and Sentinel Creek, north of Hebgen Dam on Beaver Creek, will provide high elevation data for both the Gallatin and Madison drainages.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

MADISON and GALLATIN RIVER BASINS

SNOW SURVEY DATA

WATERSHED IX

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
10D14	Arch Falls	7350	3/26	52	16.0	14.2	-
11D09	Bear Basin	8150	3/25	71	25.8	22.6	-
11E09	Big Springs	6500	3/29	68	26.3	21.8	22.6
10D15	Bridger Bowl	7250	4/1	79	33.0	-	-
11D07	Call Road	8050	3/30	47	13.9	12.7	-
10E03	Canyon	7750	3/31	61	23.4	16.1	16.3
11D08	Clover Meadow	8600	3/30	62	22.4	16.8	-
10D05	Crevice Mountain	8400	4/1	42	11.7	10.6	9.5
11D06	Crockett Lake	8400	3/30	46	13.8	12.2	-
10D04	Devil's Slide	8100	3/26	83	29.8	25.6	22.3
11D12	Four Mile	6900	3/31	38	11.2	-	-
11E05	Hebgen Dam	6550	3/28	48	15.2	13.6	12.2
10D03	Hood Meadow	6600	3/26	46	13.5	12.6	10.0
11E10	Island Park	6315	3/29	55	20.8	15.9	17.6
11D05	Jack Creek	7500	4/1	22	7.0	4.3	-
11D10	Little Park	7400	3/25	58	19.9	17.6	-
11D11	Lower Twin	7900	3/31	75	28.8	-	-
10D01	New World	6700	3/25	47	13.8	14.6	10.8
11E02	Norris Basin	7500	3/28	50	14.6	11.1	9.9*
11D03	North Meadow	7500	3/31	45	13.7	6.4	-
11E21	Potomageton Park	7150	4/2	52	18.5	-	-
10D10	Sacajawea	6550	3/25	55	18.4	15.0	13.0*
11E20	Sentinel Creek	8300	4/2	81	30.9	-	-
10E07	Thumb Divide	7900	3/29	87	32.1	19.0	24.2
11E06	Twenty-One Mile	7150	3/28	73	27.2	18.5	18.2
11E08	Valley View	6500	3/29	65	25.9	19.4	16.4
11E07	West Yellowstone	6700	3/29	48	14.8	11.0	11.7

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
10D11M	Battle Ridge	6020	48	17.6	3/25	15.4	9.9	-
11D02M	College Site	4856	54	14.5	4/2	10.4	12.1	11.2
10D04M	Red Bluff	4800	40	4.7	3/31	2.3	3.3	-
11E06M	Twenty-One Mile	7150	48	8.8	3/27	1.6	3.6	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

SNOW SURVEY DATA

AS OF APRIL 1, 1965

WATERSHED IX

(Inches)

Snow Course		Date of Survey	Current Date			Past Record	
No.	Name	Elevation	Snow Depth	Snow Water Content	Water Content	Last Year	Average
1CD14	Arsh Falls	7350	3/26	52	16.0	14.2	-
1LE09	Bear Basin	8150	3/25	71	25.8	22.6	-
1ZE09	Big Springs	6300	3/29	64	26.3	21.8	22.6
1GH15	Bridger Bowl	7560	4/1	90	33.0	-	-
1LH07	Cabin Road	8050	3/30	47	13.9	12.7	-
1CE09	Canyon	7160	3/31	81	34.4	16.1	16.3
1LD08	Clover Meadow	8400	3/30	62	22.4	21.8	-
1CD05	Cowties Mountain	5400	4/1	42	10.7	10.6	7.3
1LD06	Crochett Lake	7400	3/30	41	13.8	12.1	-
1CD02	Devil's Slide	8100	3/26	84	29.2	25.6	22.3
1LD12	Fort Mile	6400	3/31	38	11.2	-	-
1LH05	Hebgen Lake	7120	3/28	46	15.4	13.6	12.2
1CD03	Hood Meadow	6500	3/26	66	23.1	12.6	10.0
1LE10	Island Park	6310	3/29	55	20.8	15.9	17.6
1LD05	Jack Creek	7500	4/1	22	7.8	4.3	-
1LD10	Little Park	7400	3/25	49	16.7	17.6	-
1LD13	Lower Twin	7400	3/31	75	26.3	-	-
1CD01	New World	6500	3/25	47	13.5	14.6	10.8
1LE02	Porcis Basin	7500	3/28	80	24.6	11.1	9.9
1LD09	Red-Top Meadow	7500	3/31	45	13.7	6.4	-
1LE21	Stockade Park	7150	4/2	52	18.5	-	-
1CD10	Sawtooth	6150	3/26	45	18.4	11.0	13.0
1LE20	Sentinel Creek	8300	4/2	28	10.0	-	-
1CE07	Three Divide	7000	3/29	60	22.1	14.0	14.2
1LE06	Twenty-One Mile	7150	3/28	70	27.2	18.5	15.2
1LE08	Valley View	6500	3/29	65	25.9	19.4	16.4
1LE07	West Yellowstone	6700	3/29	48	14.5	11.0	11.7

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

Soil Moisture Station		Date of Survey	Current Data			Past Record	
No.	Name	Elevation	Snow Depth	Snow Water Content	Soil Moisture	Last Year	Average
1CD13M	Battle Ridge	5300	4/5	17.6	3/25	15.4	9.9
1LE02M	College Site	4050	3/5	14.3	4/2	10.4	12.1
1CD03M	Red Mountain	4400	3/5	4.7	4/11	3.3	3.3
1LE03M	Twenty-One Mile	7150	4/2	8.8	3/27	1.6	3.0

NOTE: All averages based on 1952-1962 10 year period; "Average" and "Average for Period of Record"

WATER SUPPLY FORECASTS

WATERSHED IX

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MADISON RIVER					
0375	West Yellowstone (near)	Apr-Sept	247	119	216	208
0385	Grayling (near)(2)	Apr-Sept	509	121	474	420
0410	McAllister (near)(3)	Apr-Sept	890	124	870	718
	GALLATIN RIVER					
0435	Gateway (near)	Apr-Sept	565	126	551	447
	BRIDGER CREEK					
0485	Bozeman (near)	Apr-Sept	25.5	128	23.5	19.9
	HYALITE CREEK					
0500	Bozeman (near)(4)	Apr-Sept	46.2	130	45.8	35.6
	GALLATIN RIVER					
0525	Logan (at)	Apr-Sept	638	137	621	467
	MISSOURI RIVER					
0545	Toston (at)(3)	Apr-Sept	2850	132	2694	2147

(2) Adjusted for storage in Hebgen Lake.
(3) Adjusted for storage in Hebgen and Ennis Lakes.
(4) Adjusted for storage in Middle Creek Reservoir.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0380	Hebgen Lake	384.8	224.4	211.3	179.1
0405	Ennis Lake	41.0	14.4	39.2	36.4
0495	Middle Creek	8.0	4.0	3.2	3.9

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1964

(1000 acre feet)

No.	River and forecast point	Forecast period	Average	Probabilities: Most probable	Probabilities: Most probable	Measured flow: Last year	Measured flow: Average
	MADISON RIVER						
C575	West Yellowstone (near)	Apr-Sept	247	119	118	215	206
C585	Hebgen Lake (near)(2)	Apr-Sept	309	121	124	215	235
C610	Ennis Lake (near)(2)	Apr-Sept	650	124	870	718	
	GALLATIN RIVER						
C635	Gateway (near)	Apr-Sept	565	126	321	447	
	YELLOWSTONE RIVER						
C655	Corwin Springs (near)	Apr-Sept	83.5	128	33.5	39.9	
	BIGHORN RIVER						
C700	Bighorn (near)(4)	Apr-Sept	46.2	130	45.4	35.6	
	GALLATIN RIVER						
C825	Logan (at)	Apr-Sept	634	127	621	487	
	MISSOURI RIVER						
C845	Toston (at)(3)	Apr-Sept	2050	129	2494	2142	

(2) Adjusted for storage in Hebgen Lake.
(3) Adjusted for storage in Canyon and Ennis lakes.
(4) Adjusted for storage in middle fork Bighorn Reservoir.

"PROVISIONAL DATA FURNISHED BY W. H. DAVIDSON WARREN

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1964

(1000 acre feet)

No.	Reservoir	Usable capacity	Usable capacity: This year	Usable capacity: Last year	Average
C590	Hebgen Lake	306.5	322.4	212.3	175.1
C605	Ennis Lake	41.0	34.4	35.2	36.4
C695	Middle Creek	8.5	4.0	3.2	3.9

NOTE: ALL AVERAGES BASED ON 1948-1962 15 YEAR PERIOD.

WATER SUPPLY OUTLOOK
JUDITH and MUSSELSHELL RIVER BASINS
MONTANA

as of
APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
Data included in this report were obtained in cooperation with other Federal, State and private organizations

The irrigation water supply outlook is very good to excellent. Late season water supplies are expected to be above average. High elevation snow is very dense and near maximum of record. Median elevation snow is above average and low elevation snow is near or below average. Currently the mountain snow pack averages about the same as last year and is 34 percent above the 1948-62 average.

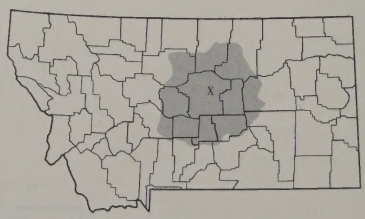
Runoff is forecast to be about fifth or sixth highest volume that has occurred in the past 30 years. The rate runoff occurs and peak flows will depend largely on temperatures and precipitation during the main snow melt period. Average or below average precipitation and temperatures will allow runoff to occur with little damage. Likewise, above average conditions, particularly heavy rain on warm, ripe snow pack, will cause streams to leave their banks.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

JUDITH and MUSSELSHELL RIVER BASINS

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED X

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
10C05	Bald Ridge	7500	3/26	52	16.6	14.8	11.7*
9C01	Crystal Lake	6100	4/1	50	16.1	17.7	12.2
10C07	Elk Peak	8000	3/30	65	23.0	19.4	-
10C02	Grasshopper	7000	3/30	28	6.7	8.4	5.7
10C01	Kings Hill	7500	3/30	56	17.0	16.7	13.6
10C03	Porcupine R. S.	6500	3/26	38	10.4	10.5	7.7
9A01	Rocky Boy	5200	3/31	26	7.1	6.3	4.3
10C08	South Fork Shields	8100	3/26	80	30.5	-	-
10C06	Spur Park	8000	3/31	74	27.5	25.4	-

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
10C01M	Kings Hill	7420	48	11.8	3/31	8.2	7.8	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

JUDITH and MUSSELSHELL RIVER BASINS

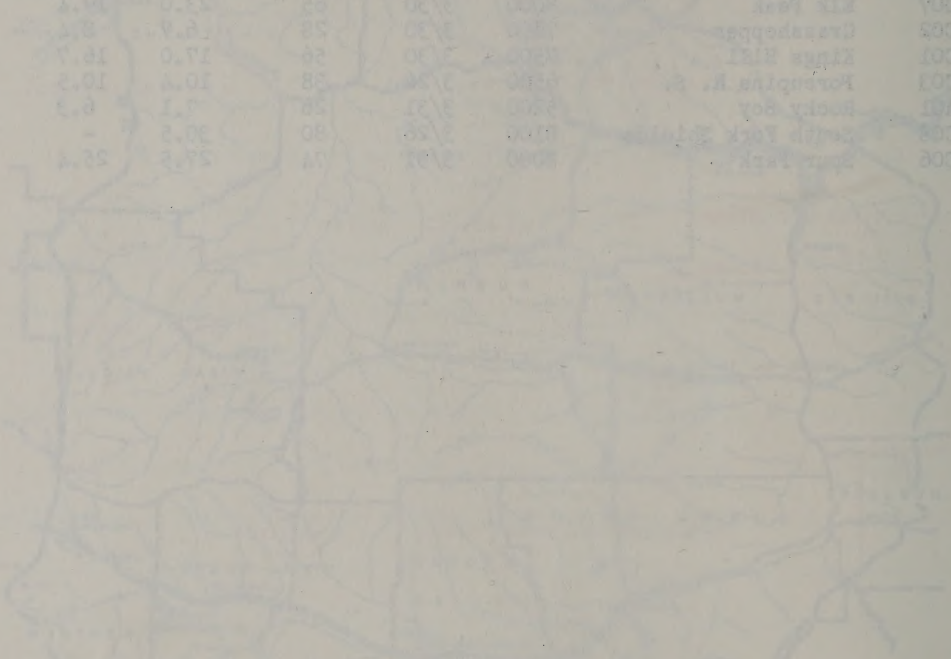
SNOW SURVEY DATA

WATERSHED I

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA					PAST RECORD		
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT		LAST YEAR	AVERAGE*
10C05	Sixty Ridge	7800	3/26	72	16.6	24.2		11.7*	
9C01	Crystal Lake	6100	4/1	50	10.1	27.7		12.2	
10C07	Elk Park	5700	3/30	65	22.0	14.4		-	
10C02	Grassshopper	6100	3/30	28	6.7	8.1		5.7	
10C01	Kings Hill	6500	3/30	56	17.0	16.7		13.6	
10C03	Porcupine R. S.	6100	3/24	38	10.4	10.5		7.7	
9A01	Rocky Boy	5300	3/31	38	7.1	6.3		4.3	
10C08	South Fork Judith	6100	3/24	80	30.5	-		-	
10C06	Stony Park	8000	3/27	74	27.5	25.4		-	



SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL MOISTURE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	AVERAGE*
10C01M	Kings Hill	7420	48	11.8	3/31	18.2	7.8	-

NOTE: All AVERAGES BASED ON 1949-1963 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD.

WATER SUPPLY FORECASTS

WATERSHED X

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SOUTH FORK MUSSELSHELL R.					
1185	Martinsdale (above)	Apr-Sept	67.5	138	59.4	48.8
	MISSOURI RIVER					
1150	Zortman (near)(6)	Apr-Sept	6000	133	6697	4508

(6) Corrected for storage in Canyon Ferry and Tiber Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
1105	Ackley Lake	5.8	-	-	3.8
1165	Durand	7.0	6.8	4.5	4.9
1190	Martinsdale	23.1	7.3	7.6	8.8
1225	Deadman's Basin	72.2	52.7	55.0	41.6

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

No.	River and Forecast Point	Forecast Period	Forecast Mid-Point	Forecast Average	Measured Flow Last Year*	Measured Flow Average
	SOUTH FORK MUSKINGUM R.					
1165	Martinsville (above)	Apr-Sept	67.5	139	39.1	48.8
	MISSOURI RIVER					
1150	Fort Peck (power)(6)	Apr-Sept	6000	133	6977	4508

(6) Corrected for storage in Canyon Ferry and Tiber Reservoirs.

*Provisional data furnished by U. S. Geological Survey

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

No.	Reservoir	Usable Capacity	This Year	Last Year	Average
1105	Ashley Lake	5.8	-	-	3.8
1165	Quaker	7.0	6.5	6.5	4.9
1190	Martinsville	23.1	7.3	7.6	8.8
1225	Deadman's Basin	72.2	52.7	55.0	42.6

NOTE: All averages based on 1924-1964 (40 year period).

WATER SUPPLY OUTLOOK
UPPER YELLOWSTONE RIVER BASIN
MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The irrigation water supply outlook remains excellent. Late season supplies are expected to be above average. Water stored in the mountain snow pack continues to increase at the higher elevations, with many high elevation snow courses having near record water content. Median elevation snow is generally above average, while low elevation snow cover is near or below average. Snow at all elevations is very dense for this time of year. Currently, the mountain snow pack averages about 30 percent greater than last year and 44 percent above the 15 year average.

Runoff is forecast to be between the third and fourth highest that has occurred in the past 30 years, except on the Clarks Fork where greater volume has been observed six times. The rate of runoff and peak flows will depend largely on temperature and precipitation during the main snow-melt period. Average or below average precipitation and temperature will allow runoff to occur with peak flows not too much higher than is common to the spring runoff. However, above average conditions, particularly heavy rain on a warm, ripe snow pack will cause rivers to leave their channels.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

UPPER YELLOWSTONE RIVER BASIN

SNOW SURVEY DATA

WATERSHED XI

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
10C05	Bald Ridge	7500	3/26	52	16.6	14.8	11.7*
10D15	Bridger Bowl	7250	4/1	79	33.0	-	-
9D01	Camp Senia	7890	4/1	32	9.6	6.6	6.3
10E03	Canyon	7750	3/31	61	23.4	16.1	16.3
10D05	Crevice Mountain	8400	4/1	42	11.7	10.6	9.5
10D04	Devil's Slide	8100	3/26	83	29.8	25.6	22.3
10E06	East Entrance	7000	3/25	38	10.1	11.6	11.3*
9D05	Grizzly Peak	8400	4/1	63	20.6	12.7	-
10D06	Independence	8000	3/26	70	24.3	18.0	19.2*
10E04	Lake Camp	7850	3/31	48	15.0	9.1	11.1
9E01	Lodgepole	8200	4/2	43	12.1	11.8	11.8*
10E01	Lupine Creek	7300	3/27	50	13.6	8.7	11.2
10D12	Monument Peak	9000	3/26	91	34.2	24.6	23.0*
10E02	Norris Basin	7500	3/28	50	14.6	11.1	9.9*
10D07	Northeast Entrance	7400	3/28	47	13.5	9.6	9.3
10C03	Porcupine R. S.	6500	3/26	38	10.4	10.5	7.7
10D10	Sacajawea	6550	3/25	55	18.4	15.0	13.0*
10C08	South Fork Shields	8100	3/26	80	30.5	-	-
10E05	Sylvan Pass	7100	3/25	54	16.3	14.7	14.9
10E07	Thumb Divide	7900	3/29	87	32.1	19.0	24.2
9D04	Timberline Creek	8850	4/2	63	21.6	15.8	14.1*
9D02	West Rosebud	7500				-	-

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
10D11M	Battle Ridge	6020	48	17.6	3/25	15.4	9.9	-
10D07M	Northeast Entrance	7350	48	9.4	3/28	5.8	8.0	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

SNOW SURVEY DATA

AS OF APRIL 1, 1965

No.	Snow Course Name	Elev. Feet	Snow Depth Inches	Water Content Inches	Snow Depth Inches	Water Content Inches	Last Year	Average
10C05	Fish Ridge	9500	35	12	40.0	15.8	12.7*	
10C08	Sheepeater Peak	7400	5	1	5.0	1.0	-	
9P01	Cache Creek	7500	4	1	6.0	2.4	6.5	
10C03	Dunraven	7750	71	21	73.0	20.0	16.3	
10D05	Crevice Creek	8400	4	2	11.7	3.0	9.5	
10D04	Devil's Slide	8100	35	12	39.0	13.0	22.3	
10C06	Fish Hatchery	7400	35	12	12.7	3.0	11.3*	
9D05	Grizzly Peak	8400	83	29	[illegible]	12.7	-	
10D06	Independence	8700	25	9	5.0	1.0	8.2*	
10C01	Lake Cole	7800	4	1	2.0	0.3	1.1	
9P01	Lodgepole	8200	2	1	2.0	0.5	1.8*	
10C02	Lupine Creek	7500	27	9	23.0	7.0	11.4	
10D12	Mammoth	9000	86	31	34.0	8.0	30.0*	
10C02	Monida Pass	7500	35	10	14.0	1.1	6.9*	
10D07	Northeast Entrance	7800	24	8	23.0	9.0	9.3	
10C03	Pretty Mountain N.	8400	35	10	16.0	10.0	7.7	
10C10	Sawtooth	6500	25	5	18.0	5.0	13.0*	
10C08	South Fork Madison	8100	35	10	30.0	-	-	
10C05	Sylvan Pass	7300	25	6	18.0	1.0	14.0*	
10D07	Tower Falls	6800	8	2	30.0	7.0	3.2	
9D04	Timber Line Creek	8400	42	15	21.0	5.0	7.1*	
9D02	West Thumb	7400						

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

No.	Soil Moisture Station Name	Elev. Feet	Soil Moisture Data: Depth Inches	Date of Survey	Soil Moisture Data: Last Year	Average
10B12M	Mammoth Springs	6000	45	3/25	15.0	9.0
10D07M	Northeast Entrance	7750	45	3/29	5.0	8.0

WATER SUPPLY FORECASTS

WATERSHED XI

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	Apr-Sept	2275	121	2128	1877
1925	Livingston (near)	Apr-Sept	2600	122	2392	2127
2145	Billings (at)	Apr-Sept	5020	128	4445	3913
3090	Miles City (at)(12)	Apr-Sept	7830	135		5778
3295	Sidney (near)(12)	Apr-Sept	8100	138		5850
	SHIELDS RIVER					
1935	Clyde Park (at)	Apr-Sept	144	145	133	99.0
	BOULDER RIVER					
2000	Big Timber (at)	Apr-Sept	460	134	375	343
	STILLWATER RIVER					
2050	Absarokee (near)(11)	Apr-Sept	745	135	553	552
	CLARKS FORK RIVER					
2075	Chance (at)	Apr-Sept	690	118	602	583
2085	Edgar (at)	Apr-Sept	725	119	651	609
	ROCK CREEK					
2095	Red Lodge (near)	Apr-Sept	132	128	96.7	103

(11) Adjusted for storage in Mystic Lake.
(12) Adjusted for storage in Buffalo Bill and Boysen Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
2040	Mystic Lake	20.8	4.8	5.7	4.8
2120	Cooney	27.5	14.8	19.1	13.5

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

No.	River and Forecast Point	Forecast Period	Forecast This Year	Percent Average	Measured Flow Last Year*	Average
	YELLOWSTONE RIVER					
1015	Corwin Springs (ac)	Apr-Sept	2275	121	2128	1877
1025	Livingston (mean)	Apr-Sept	2600	122	2392	2127
2145	Billings (ac)	Apr-Sept	5020	128	4145	3913
3090	Miles City (ac)(12)	Apr-Sept	7830	135		5778
3295	Sidney (mean)(12)	Apr-Sept	8100	134		5850
	MISSOURI RIVER					
1995	Clyde Park (ac)	Apr-Sept	144	145	133	99.0
	SOUTHERN RIVER					
2000	Big Timber (ac)	Apr-Sept	160	134	372	343
	BITTERROOT RIVER					
2090	Absarokee (mean)(11)	Apr-Sept	715	135	553	592
	GALLATIN RIVER					
2075	Gallatin (ac)	Apr-Sept	690	118	602	583
2085	Edgar (ac)	Apr-Sept	725	119	651	609
	ROCK CREEK					
2095	Red Lodge (mean)	Apr-Sept	132	128	96.7	103

(11) Adjusted for storage in Hyalite Lake.
(12) Adjusted for storage in Bighorn Lake, Bill and Boysen Reservoirs.

*Recorded data available at U. S. Geological Survey

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

No.	Reservoir	Usable Capacity	This Year	Last Year	Average
2040	Hyalite Lake	20.8	4.8	3.7	4.8
2120	Cooney	27.5	14.6	19.1	13.5

NOTE: All storage data as reported for Water Year(s).

WATER SUPPLY OUTLOOK

MILK RIVER BASIN

MONTANA

as of

APRIL 1, 1965

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

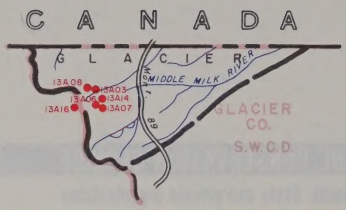
The irrigation water supply outlook remains good to very good. Snow remains very dense and continues to increase its stored water in the higher elevations of the headwaters. Late season irrigation supplies should be above average. Storage in reservoirs is near average and much better than a year ago.

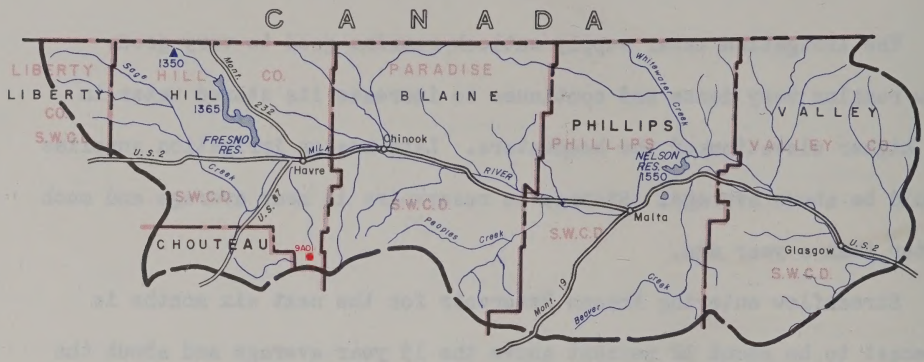
Streamflow entering Fresno Reservoir for the next six months is forecast to be about 12 percent above the 15 year average and about the same amount as occurred last year.

Report prepared by
P.E. FARNES AND S.E. COOK
U.S. DEPARTMENT OF AGRICULTURE—SOIL CONSERVATION SERVICE
BOX 855, BOZEMAN, MONTANA 59715

"The Conservation of Water begins with the Snow Survey"

MILK RIVER BASIN





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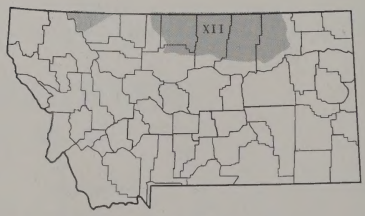
25 0 25 50
SCALE IN MILES



WATERSHED LOCATION

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

SNOW SURVEY DATA

WATERSHED XII

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13A05	Marias Pass	5250	3/30	76	26.8	16.4	20.1
13A16	Mineral Creek	4000	3/30	76	26.6	22.8	22.9
9A01	Rocky Boy	5200	3/31	26	7.1	6.3	4.3
	BOW RIVER - CANADA						
ALB. 1	Bow River	5100	3/30	41	11.2	5.4	9.2
ALB. 2	North Course	5400	3/29	39	10.2	6.0	9.1
ALB. 5	Lake Louise	5800	3/30	43	13.3	7.4	10.9
ALB. 6	Mirror Lake	6600	3/30	49	14.9	7.6	13.1
ALB. 8	Misc. Lake Louise	5700	3/30	49	12.7	7.0	11.7
ALB. 10	Mount Eisenhower	5000	3/29	26	5.9	2.8	-

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13A05M	Marias Pass	5250	54	6.5	3/31	5.7	4.5	5.4

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED XII

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MILK RIVER					
1350	Eastern Crossing (at)	Apr-Sept	280	112	280	250

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
1365	Fresno	127.2	83.3	36.6	81.5
1550	Nelson	66.8	33.9	30.0	34.9

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).